

What Is Claimed Is:

1 1. A method for fabricating a liquid crystal display
2 including a plurality of pixels, the method comprising the steps
3 of:
4 forming a gate pattern, including a plurality of separated
5 gate lines and a gate electrode array electrically
6 connected with the separated gate lines, in a
7 substrate;
8 forming a channel array, isolated from the gate electrode
9 array;
10 forming a source/drain pair array, with the source and
11 drain spaced apart from each other, in the channel
12 array; and
13 forming a pixel electrode array to connect the drains of
14 the source/drain pair array;
15 wherein the steps for forming the gate pattern or the
16 source/drain pair array, at least, comprise the steps
17 of:
18 forming a photoresist layer;
19 dividing the photoresist layer into a first region, a
20 second region, and a boundary region, divided into
21 a first portion and a second portion by a boundary
22 line, between the first region and the second region;
23 defining the first region and the first portion with a first
24 mask; and
25 defining the second region and the second portion with a
26 second mask;
27 wherein the boundary region corresponds to a sub-array of
28 the gate electrode array or the source/drain pair

29 array; for each row of the gate electrodes or each
30 row of the source/drain pairs in the sub-array, the
31 boundary line is formed in a special pattern; the
32 gate electrodes or the source/drain electrode pairs
33 at the boundary region defined by both of the first
34 and second masks are divided into a first portion
35 patterned by the first mask and a second portion
36 patterned by the second mask; the boundary region is
37 divided incrementally or by square wave such that the
38 area of each of the gate electrodes or the
39 source/drain electrode pairs in the first portion
40 increases along the boundary direction and that in
41 the second portion decreases along the boundary
42 direction.

1 2. The method as claimed in claim 1, wherein the boundary
2 line used for dividing each row of the gate electrodes and each
3 row of the source/drain pairs is a tilted straight line.

1 3. The method as claimed in claim 1, wherein the boundary
2 line used for dividing each row of the gate electrodes and each
3 row of the source/drain pairs is in a ladder pattern.

1 4. The method as claimed in claim 1, wherein the boundary
2 line used for dividing each row of the gate electrodes and each
3 row of the source/drain pairs is in a square wave pattern.

1 5. The method as claimed in claim 1, wherein the boundary
2 line used for dividing each row of the gate electrodes and each
3 row of the source/drain pairs is in an embedded line pattern.

1 6. The method as claimed in claim 1, wherein the boundary
2 line divides a row of the gate or source/drain electrodes from
3 the first region to the second region, then continues to divide
4 the next row of the gate or source/drain electrodes from the
5 second region to the first region, and so forth.

1 7. The method as claimed in claim 1, wherein the boundary
2 line divides a row of the gate or source/drain electrodes from
3 the first region to the second region, then goes back to the first
4 region and continues to divide the next row of the gate or
5 source/drain electrodes from the first region to the second
6 region, and so forth.

1 8. A liquid crystal display, wherein the shot mura
2 phenomenon is minimized, is fabricated with the method as
3 claimed in claim 1.

1 9. A method for fabricating a liquid crystal display
2 including a plurality of pixels, the method comprising the steps
3 of:

4 forming a gate pattern, a gate electrode array ,a channel
5 array isolated from the gate electrode array, a
6 source/drain pair array, and a pixel electrode array
7 in a substrate; wherein the gate pattern includes a
8 plurality of separated gate lines connected with the
9 electrode array, and the source and drain in each
10 source/drain pair are spaced from each other, and the
11 pixel electrode array is coupled to the drains of the
12 source/drain pair array;

and wherein the steps for forming the gate pattern and the source/drain pair array, at least, comprise the steps of:

forming a photoresist layer;

dividing the photoresist layer into a first region, a second region, and a boundary region, divided into a first portion and a second portion by a boundary line, between the first region and the second region;

defining the first region and the first portion with a first mask; and

defining the second region and the second portion with a second mask;

wherein the boundary region corresponds to a sub-array of the gate electrode array or the source/drain pair array; for each row of the gate electrodes or each row of the source/drain pairs in the sub-array, the boundary line is formed in a special pattern; the gate electrodes or the source/drain electrode pairs at the boundary region defined by both of the first and second masks are divided into a first portion patterned by the first mask and a second portion patterned by the second mask; the boundary region is divided incrementally or by square wave such that the area of each of the gate electrodes or the source/drain electrode pairs in the first portion increases along the boundary direction and those in the second portion decreases along the boundary direction.

1 10. The method as claimed in claim 9, wherein the boundary
2 line used for dividing each row of the gate electrodes and each
3 row of the source/drain pairs is a tilted straight line.

1 11. The method as claimed in claim 9, wherein the boundary
2 line used for dividing each row of the gate electrodes and each
3 row of the source/drain pairs is in a ladder pattern.

1 12. The method as claimed in claim 9, wherein the boundary
2 line used for dividing each row of the gate electrodes and each
3 row of the source/drain pairs is in a square wave pattern.

1 13. The method as claimed in claim 9, wherein the boundary
2 line used for dividing each row of the gate electrodes and each
3 row of the source/drain pairs is in an embedded line pattern.

1 14. The method as claimed in claim 9, wherein the boundary
2 line divides a row of the gate or source/drain electrodes from
3 the first region to the second region, then continues to divide
4 the next row of the gate or source/drain electrodes from the
5 second region to the first region, and so forth.

1 15. The method as claimed in claim 9, wherein the boundary
2 line divides a row of the gate or source/drain electrodes from
3 the first region to the second region, then goes back to the first
4 region and continues to divide the next row of the gate or
5 source/drain electrodes from the first region to the second
6 region, and so forth.